

AD-A100 527

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2  
20401A ASSAULT BREAKER, MISSILE NUMBER 0002, ROUND NUMBER M161. (U)  
MAY 81 D C KELLER

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DR 1176  
May 1981

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LEVEL II

(12)

METEOROLOGICAL DATA REPORT

20401A Assault Breaker  
Missile No. 0002  
Round No. M1G1  
1 May 1981

by

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Program Support Coordinator  
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ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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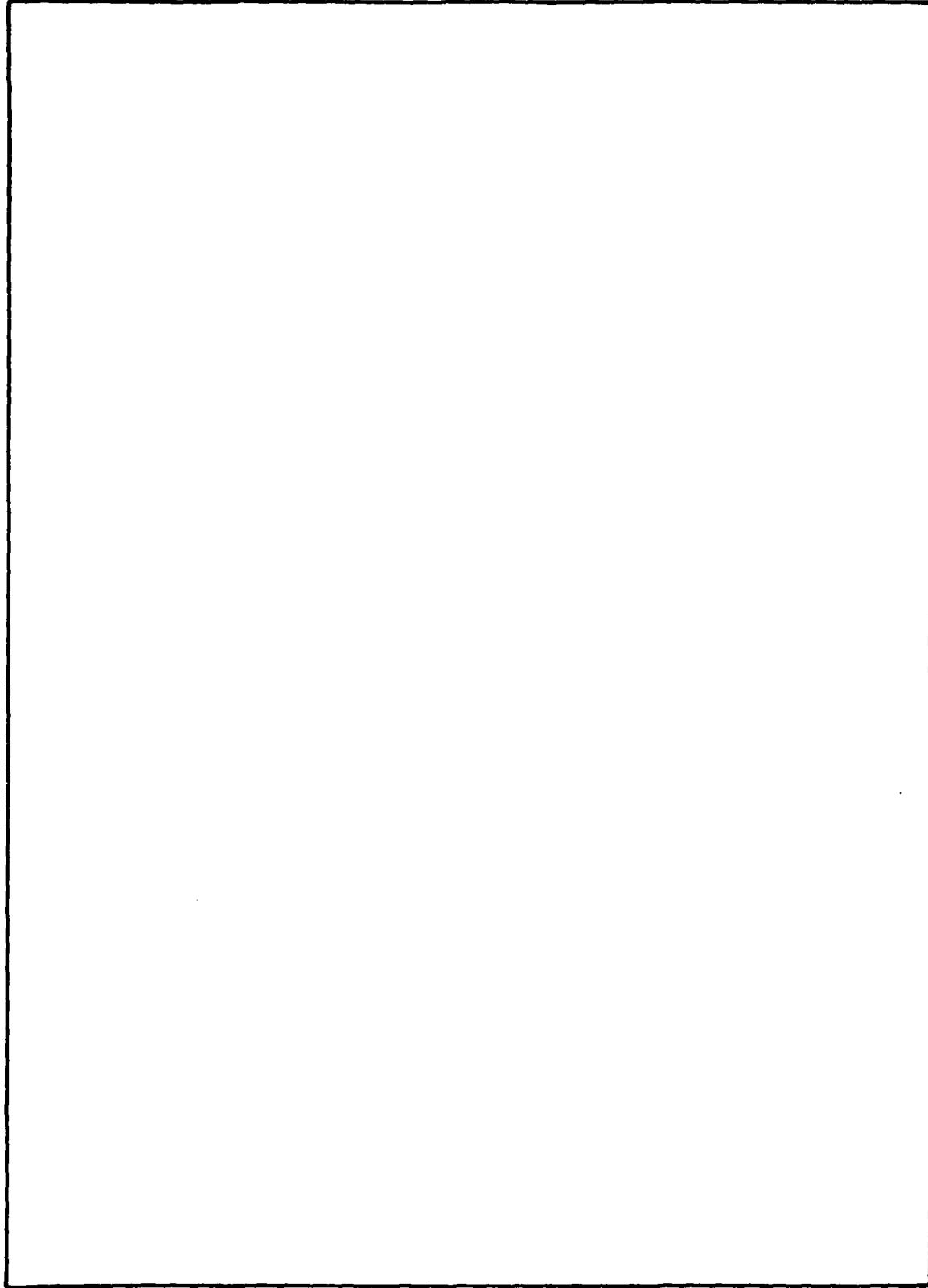
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  Meteorological data gathered for the launching of the 20401A Assault Breaker, Missile Number 0002, Round Number M1G1 presented in tabular form.		

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## INTRODUCTION

20401A Assault Breaker, Missile Number 0002, Round Number M1G1, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0918 MDT, on 01 May 1981. The scheduled launch time was 0915 MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from Single Theodolite obital observations at:

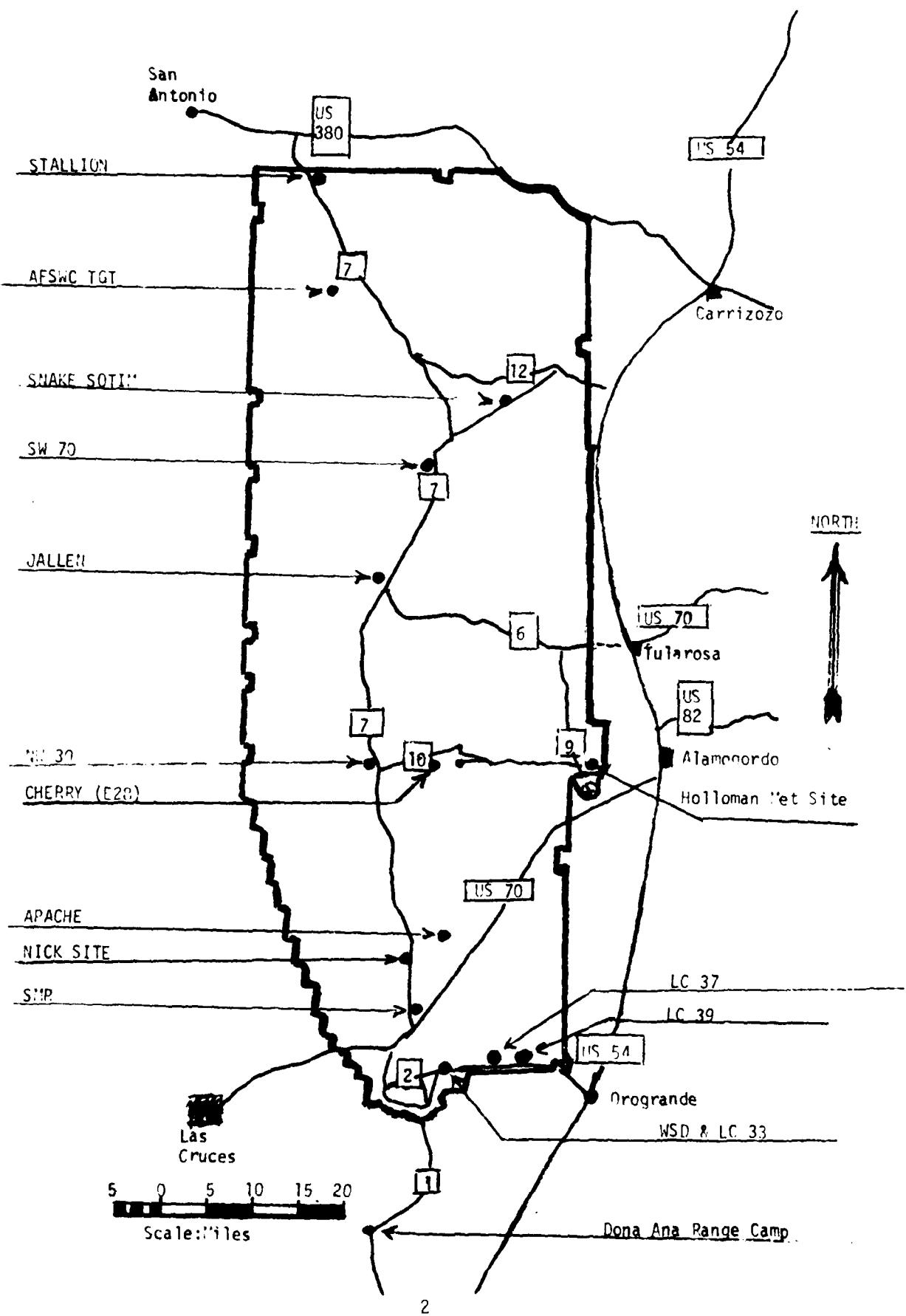
### SITE AND ALTITUDE

LC-33 2760 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites:

### SITE AND TIME

JAL	0645 MDT
LC-37	0815 MDT
HM S	0815 MDT
WSD	0918 MDT
JAL	0925 MDT



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TABLE 1. Surface Observations taken at 0918 MDT,  
1 May 1981, at LC-33, 20401A Assault  
Breaker, Missile Number 0002, Round  
Number M1G1.

ELATATION	3983	FT/MSL
PRESSURE	881.1	"
TEMPERATURE	20.7	"
RELATIVE HUMIDITY	56	%
DEW POINT	11.7	"
DENSITY	1038	SLP/MM
WIND SPEED	03	MPH
WIND DIRECTION	159	DEGREES
CLOUD COVER	3/CU/6000 1st Layer 1/AC/12000 2nd Layer	AMT/TYPE/HGT

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TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WITH  
20401A Assault Breaker, Missile No. 0002, Round No. M1G1,  
1 May 1981, at 0918 MDT.

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	157	03	T-30	141	02	T-30	171	03
T-20	157	04	T-20	147	02	T-20	153	04
T-10	157	03	T-10	148	02	T-10	139	04
T0.0	156	04	T0.0	149	02	T0.0	135	04
T+10	146	04	T+10	147	02	T+10	137	03

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WITH 20401A (FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	165	03	T-30	162	04
T-20	160	03	T-20	162	04
T-10	159	03	T-10	163	05
T0.0	159	03	T0.0	166	04
T+10	162	03	T+10	157	04

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	173	04	T-30	171	05
T-20	173	04	T-20	171	05
T-10	176	06	T-10	171	05
T0.0	180	05	T0.0	171	04
T+10	180	04	T+10	168	03

## PROJECT SURFACE OBSERVATION

TABLE 4

DATE	01	MONTH	MAY	YEAR	1981					
TIME	MM DD	PRESSURE	TEMPERATURE	DEW POINT	RELATIVE HUMIDITY	DENSITY	DIRECTION	MIND SPEED	CHARACTER	VISIBILITY
		mb	°F	°C	%	gm/m <sup>3</sup>	deg Tn	kts	kts	ITY
0845		876.0		23.0		08.9	41	040	06	
0918		876.4		24.0		09.8	40	010	10	
0945		876.7		23.8		09.4	40	040	06	

OBSTRUCTIONS TO VISIBILITY	CLOUDS					REMARKS	
	1st LAYER	AMT	HGT	2nd LAYER	AMT	HGT	
1	CU	5.000	1	AC	14,000	1	
2	CU	5.000	3	AC	14,000		
1	CU	5.000	3	AC	14,000		

## PSYCHROMETRIC COMPUTATION

TIME:	0845	0915	0945
DRY BULB TEMP.	23.0	24.0	23.8
WET BULB TEMP.	14.3	15.1	14.8
WET BULB DEPR.	08.7	08.9	09.0
DEW POINT	08.9	09.8	09.4
RELATIVE HUMID.	41	40	40

## PILOT BALLOON MEASUREMENTS

TABLE 5

RELEASED FROM LC-33 E&amp;A

DATE 01 May 1981

TIME 0908 A.M.

COORDINATES (WSTM) 485,135.76 185,919.24 3988.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO

HEIGHTS ARE METERS AGL X OR FELT AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED FTS	HEIGHT AGL	DIRECTION DEGREES	SPEED FTS	HEIGHT AGL	DIRECTION DEGREES	SPEED FTS
sfc	156	03	1860	107	13			
60	MISG	MISG	1920	124	11			
120	110	04	1980	121	10			
180	104	04	2040	136	12			
240	092	07	2100	121	09			
300	123	07	2160	116	13			
360	102	07	2220	110	10			
420	092	10	2280	122	07			
480	106	08	2340	123	07			
540	100	10	2400	115	09			
600	107	12	2460	139	07			
660	101	13	2520	147	08			
720	008	13	2580	130	09			
780	091	14	2640	134	06			
840	101	14	2700	127	08			
900	096	16	2760	125	09			
960	088	18						
1020	088	16						
1080	090	18						
1140	093	15						
1200	095	16						
1260	095	21						
1320	100	22						
1380	103	20						
1440	105	19						
1500	110	18						
1560	105	20						
1620	104	18						
1680	103	19						
1740	099	16						
1800	102	14						

## PILOT BALLOON MEASURED WIND DATA

TABLE 6

RELEASED FROM LC-33 E&amp;A

DATE 01 MAY 1981

TIME 0918 MUT

COORDINATES (WSTM) 485,135.76

185,919.24

3988.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO

HEIGHTS ARE METERS AGL X OR FEET AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED PTS	HEIGHT AGL	DIRECTION DEGREES	SPEED PTS	HEIGHT AGL	DIRECTION DEGREES	SPEED PTS
sfc	159	03	1860	110	11			
60	MISG	MISG	1920	117	11			
120	120	02	1980	130	09			
180	161	03	2040	120	09			
240	161	05	2100	125	10			
300	154	06	2160	113	11			
360	153	04	2220	109	09			
420	110	06	2280	110	13			
480	109	06	2340	109	11			
540	099	08	2400	134	11			
600	115	11	2460	143	08			
660	098	13	2520	130	10			
720	082	08	2580	142	08			
780	104	11	2640	142	09			
840	095	13	2700	143	07			
900	092	14	2760	127	08			
960	094	14						
1020	088	14						
1080	096	19						
1140	097	22						
1200	101	20						
1260	099	21						
1320	096	23						
1380	097	22						
1440	100	21						
1500	102	22						
1560	101	19						
1620	105	19						
1680	113	16						
1740	120	16						
1800	109	12						

AIMING COMPUTER MET MESSAGE  
1 May 1981

JAL 0645 MDT  
METCM1332065  
010680124872  
00018003 28960872  
01044019 29240862  
02052029 29280837  
03071013 28950799  
04159008 28610753  
05258009 28300709  
06315013 27910667  
07250012 27510628  
08228018 27090590  
09236022 26690553  
10239023 26330519  
11296018 25950486  
12310022 25320440  
13360020 24800384

STATION ALTITUDE 4051.70 FEET MSL  
1 MAY 81  
ASCENSION NO. 27

SIGNIFICANT LEVEL DATA  
1210050027  
JALLEN  
TABLE 8

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT
872.0	4051.0	15.2	53.0
861.8	4380.7	18.6	51.0
850.0	4769.9	10.2	50.0
774.8	7159.5	13.0	51.0
716.0	9528.0	9.4	54.0
700.0	10143.3	8.0	60.0
632.4	12868.9	1.7	63.0
595.6	14448.0	-2.3	68.0
579.0	15184.1	-4.5	75.3
511.4	18362.9	-11.2	12.4
500.0	18931.4	-12.2	-17.4
470.4	20455.7	-16.0	-21.4
459.0	21061.1	-18.3	-29.1
415.8	23467.7	-22.8	-32.6
400.0	24401.2	-23.5	-36.5
393.8	24777.0	-23.7	-35.7
324.8	29314.0	-34.0	-46.1
304.8	30768.5	-37.6	-49.3

STATION ALTITUDE 4051.00 FEET MSL  
 1 MAY 81 0645 HRS MDT  
 ASCENSION NO. 27

UPPER AIR DATA  
 1210030027  
 JALLEN  
 TABLE 9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES	AIR DEWPOINT DEGREES	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.0	872.0	15.2	5.7	53.0	1049.3	662.9	10.0	3.1	1.000276
4500.0	858.2	18.8	8.4	50.7	1019.1	667.3	26.5	6.8	1.000276
5000.0	845.0	18.6	8.3	51.0	1001.5	667.1	31.6	11.2	1.000272
5500.0	828.1	17.5	7.8	53.1	987.9	665.7	35.8	15.6	1.000268
6000.0	813.4	16.5	7.3	55.2	974.5	664.3	35.8	17.5	1.000263
6500.0	799.0	15.1	6.7	57.3	961.3	662.9	41.3	13.0	1.000259
7000.0	784.8	13.9	6.1	59.5	948.3	661.5	51.8	9.8	1.000255
7500.0	770.8	12.8	5.5	61.2	935.1	660.2	67.7	8.3	1.000250
8000.0	756.9	11.9	4.9	61.9	921.0	659.2	80.3	8.5	1.000246
8500.0	743.3	11.1	4.2	62.6	907.1	658.2	87.0	9.5	1.000241
9000.0	729.9	10.3	3.6	63.3	893.4	657.2	103.9	8.8	1.000236
9500.0	716.7	9.4	3.0	64.0	880.0	656.2	126.9	8.6	1.000232
10000.0	703.7	8.3	1.2	60.9	867.8	654.8	159.4	10.1	1.000225
10500.0	690.8	7.2	0.0	60.4	855.5	653.4	174.9	12.5	1.000220
11000.0	678.0	6.0	-0.9	60.9	843.4	652.0	178.5	13.3	1.000216
11500.0	665.5	4.9	-1.9	61.5	831.4	650.6	175.2	12.9	1.000211
12000.0	653.2	3.7	-2.9	62.0	819.6	649.2	165.7	12.0	1.000207
12500.0	641.2	2.6	-3.8	62.6	807.9	647.7	154.3	11.7	1.000203
13000.0	629.3	1.4	-4.5	65.1	796.4	646.3	142.7	11.9	1.000200
13500.0	617.4	0.1	-4.2	73.0	785.0	644.9	135.5	13.3	1.000198
14000.0	605.8	-1.2	-4.0	80.9	773.7	643.4	130.5	15.0	1.000196
14500.0	594.4	-2.5	-4.1	88.4	762.8	641.9	128.8	17.1	1.000193
15000.0	583.1	-3.9	-5.0	92.5	752.5	640.1	128.1	19.0	1.000190
15500.0	571.9	-5.2	-6.0	93.7	741.5	638.6	129.7	20.2	1.000186
16000.0	560.8	-6.2	-7.1	93.2	730.2	637.3	131.1	21.3	1.000182
16500.0	550.0	-7.3	-8.2	92.8	719.0	636.0	132.5	22.2	1.000178
17000.0	539.4	-8.3	-9.3	92.3	708.0	634.6	132.6	22.9	1.000174
17500.0	528.9	-9.4	-10.5	91.0	697.2	633.3	132.0	23.4	1.000170
18000.0	518.7	-10.4	-11.6	91.3	686.5	632.0	134.0	22.5	1.000167
18500.0	508.6	-11.4	-13.5	84.7	676.0	630.7	139.8	21.2	1.000163
19000.0	498.6	-12.4	-17.6	64.9	665.3	629.5	151.6	19.2	1.000157
19500.0	488.7	-13.6	-18.9	64.3	655.3	627.9	162.0	18.8	1.000154
20000.0	479.1	-14.9	-20.2	63.6	645.5	626.4	167.3	19.8	1.000151
20500.0	469.6	-16.2	-21.9	61.2	636.0	624.8	170.3	21.4	1.000148
21000.0	460.1	-18.1	-20.2	40.5	628.1	622.4	172.2	23.3	1.000143
21500.0	450.8	-19.1	-20.7	38.4	617.9	621.1	176.7	23.4	1.000141
22000.0	441.6	-20.1	-30.4	38.0	607.6	619.9	178.9	22.9	1.000138
22500.0	432.7	-21.0	-31.2	39.2	597.5	618.8	175.8	21.1	1.000136
23000.0	423.9	-21.9	-31.9	39.6	587.5	617.0	176.6	19.8	1.000133
23500.0	415.2	-22.8	-32.7	39.6	577.7	616.5	160.7	18.7	1.000131

STATION ALTITUDE 4051.00 FEET MSL  
 1 MAY 81 0645 HRS MDT  
 ASCENSION NO. 27

UPPER AIR DATA  
 1210030027  
 JALLEN  
 TABLE 9 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
24000.0	406.7	-23.2	-34.7	33.7	566.7	616.0	194.7	17.9
24500.0	398.4	-23.6	-36.3	29.8	555.9	615.6	204.7	17.9
25000.0	390.1	-24.2	-36.2	31.8	545.7	614.8	206.6	17.8
25500.0	381.9	-25.3	-37.3	31.4	536.7	613.3	204.2	18.8
26000.0	373.9	-26.5	-38.5	30.9	527.9	611.9	200.0	20.6
26500.0	366.0	-27.6	-39.6	30.5	519.2	610.5	203.3	23.5
27000.0	358.3	-28.7	-40.8	30.0	510.7	609.1	205.0	26.1
27500.0	350.0	-29.9	-41.9	29.6	502.3	607.7	203.5	23.3
28000.0	343.4	-31.0	-43.1	29.2	494.0	606.3	202.2	22.7
28500.0	336.2	-32.2	-44.2	28.7	485.9	604.8	208.1	31.6
29000.0	329.2	-33.3	-45.4	28.3	478.0	603.4	210.7	40.5
29500.0	322.2	-34.5	-46.5	28.0	470.2	601.9	211.2	49.1
30000.0	315.2	-35.7	-47.6	28.0	462.4	600.3		1.000105
30500.0	306.4	-36.9	-48.7	28.0	454.8	598.8		1.000104
								1.000102

STATION ALTITUDE 4051.00 FEET MSL  
1 MAY 81  
ASCENSION NO. 29645 HKS MUT

MANDATORY LEVELS  
1210030027  
JALLEN  
TABLE 10

GEODETIC COORDINATES  
33°16'12" LAT DEG  
106°49'51" LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE			REL. HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS
		AIR DEGREES	DEWPONT CENTIGRADE	CENTIGRADE			
850.0	4767.	19.2	8.5	50.	29.8	9.2	
800.0	6466.	15.1	6.7	57.	40.8	15.3	
750.0	8250.	11.5	4.6	62.	83.9	9.0	
700.0	10134.	8.0	.7	60.	166.1	10.9	
650.0	12126.	3.4	-3.1	62.	162.9	11.9	
600.0	14219.	-1.6	-4.0	85.	129.6	16.1	
550.0	16490.	-7.3	-8.2	93.	132.5	22.2	
500.0	18906.	-12.2	-17.4	65.	149.7	19.5	
450.0	21515.	-19.2	-29.8	38.	177.1	23.4	
400.0	24362.	-23.5	-36.5	29.	204.3	17.9	
350.0	27528.	-30.0	-42.0	30.	202.9	23.0	

STATION ALTITUDE 4051.37 FEET MSL  
 1 MAY 0815 HRS MDT  
 ASCENSION NO. 03

SIGNIFICANT LEVEL DATA  
 1210180000J  
 LC-37  
 TABLE 11

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEWPPOINT	DEGREES CENTIGRADE	
878.9	4051.4	18.5	11.1	62.0
876.2	4137.9	16.7	8.9	60.0
869.7	4639.1	18.0	9.1	56.0
850.0	4990.7	17.1	8.3	56.0
828.2	5717.5	15.5	7.3	58.0
809.0	6371.1	14.8	6.1	56.0
798.4	6738.2	15.0	6.6	57.0
742.2	8752.3	9.7	4.5	70.0
700.0	10341.9	6.2	1.1	65.0
688.0	10807.9	5.6	1.2	73.0
652.2	12238.4	2.5	-2.4	70.0
625.8	13334.4	0.8	-5.4	61.0
609.0	14051.7	-0.8	-6.7	64.0
575.2	15541.3	-4.7	-10.0	63.0
550.4	16678.3	-6.7	-12.9	61.0
525.8	17546.9	-9.6	-15.9	60.0
500.0	19417.9	-12.6	-26.2	31.0
477.8	20252.2	-15.4	-27.0	36.0
462.2	21076.1	-15.9	-31.3	25.0
400.0	24603.2	-24.0	-41.0	19.0
369.2	2671.6	-29.3	-45.5	19.0
345.5	28061.5	-31.3	-42.5	32.0
335.0	28779.4	-32.5	-44.1	30.0
300.0	31308.8	-38.4	-50.0	28.0
259.3	34552.4	-46.6		
250.0	35347.6	-48.3		

STATION ALTITUDE 4051.37 FEET MSL  
 1 MAY 61 0315 HRS MDT  
 ASCENSION NO. 63

UPPER AIR DATA  
 1210180063  
 LC-37  
 TABLE 12

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT PERCENT	REL. HUM. MM/CURIC	SOUND METER KNOTS	DENSITY DEGREES (TN)	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES	SPEED KNOTS	
4051.4	876.9	18.5	11.1	62.0	1043.8	667.2	45.0	6.0	1.000292
4500.0	965.0	17.6	9.1	57.1	1031.0	666.0	66.8	6.6	1.000281
5000.0	849.7	17.1	8.2	56.0	1015.0	665.5	84.6	8.1	1.000275
5500.0	834.7	16.0	7.6	57.4	1000.9	664.0	96.3	10.1	1.000270
6000.0	819.8	15.2	6.8	57.1	986.0	663.0	102.1	12.7	1.000265
6500.0	805.3	14.9	6.3	56.4	969.6	662.6	102.6	16.0	1.000260
7000.0	790.9	14.3	6.3	58.7	954.0	662.0	103.1	18.0	1.000257
7500.0	776.7	13.0	5.9	61.9	941.3	660.5	103.6	19.2	1.000253
8000.0	762.7	11.7	5.4	65.1	928.7	659.0	102.6	18.5	1.000249
8500.0	749.0	10.4	4.8	68.4	916.3	657.4	102.3	17.5	1.000245
9000.0	735.5	9.2	3.8	69.2	903.8	655.9	103.6	15.1	1.000240
9500.0	722.0	8.1	2.4	67.6	891.1	654.5	106.4	12.7	1.000233
10000.0	708.9	7.0	1.1	66.1	878.5	653.2	117.4	10.3	1.000228
10500.0	695.9	6.0	.5	67.7	865.5	652.0	127.4	8.7	1.000224
11000.0	683.1	5.2	.7	72.6	851.9	651.1	135.0	7.7	1.000221
11500.0	670.4	4.1	-.6	71.5	839.6	649.8	134.1	7.3	1.000216
12000.0	658.5	3.0	-.8	70.5	827.6	648.4	128.3	8.1	1.000211
12500.0	645.8	2.1	-.3	67.9	815.1	647.2	121.3	10.2	1.000206
13000.0	633.7	1.3	-.8	63.7	802.3	646.2	117.6	13.6	1.000200
13500.0	621.9	.4	-.6	61.7	790.0	645.1	116.9	17.0	1.000196
14000.0	610.2	-.7	-.7	63.8	778.4	643.8	119.9	19.6	1.000192
14500.0	598.6	-.2	-.7	63.7	767.4	642.2	122.8	21.6	1.000188
15000.0	587.3	-.3	-.9	63.4	756.6	640.6	125.8	23.0	1.000184
15500.0	576.1	-.4	-.5	63.0	746.0	639.0	129.7	23.0	1.000181
16000.0	565.1	-.5	-.11	62.2	734.2	637.9	134.1	22.6	1.000177
16500.0	554.2	-.6	-.4	61.3	722.6	636.8	138.3	19.6	1.000173
17000.0	542.5	-.5	-.7	60.7	711.7	635.4	143.4	17.0	1.000170
17500.0	530.0	-.7	-.15	60.3	701.3	633.9	149.0	15.1	1.000167
18000.0	522.6	-.10	-.0	56.5	691.0	632.4	156.8	14.2	1.000163
18500.0	512.4	-.11	-.1	52.0	680.7	630.9	171.0	14.9	1.000158
19000.0	502.3	-.12	-.3	52.5	670.5	629.4	160.0	17.2	1.000154
19500.0	492.4	-.13	-.5	52.7	660.4	627.9	185.4	20.2	1.000151
20000.0	482.6	-.14	-.8	52.8	650.4	626.4	184.4	24.1	1.000149
20500.0	472.1	-.15	-.6	52.2	532.7	639.4	183.1	27.0	1.000146
21000.0	463.6	-.15	-.9	50.9	520.7	625.4	161.4	29.2	1.000142
21500.0	454.2	-.16	-.9	52.5	49.3	617.3	623.8	181.5	29.0
22000.0	445.0	-.18	-.0	53.8	32.7	626.4	620.4	182.1	28.3
22500.0	436.0	-.19	-.2	55.2	34.9	607.5	597.9	183.5	27.1
23000.0	427.2	-.20	-.3	56.5	22.6	588.4	619.5	185.0	26.1
23500.0	418.5	-.21	-.5	57.9	21.7	579.1	618.1	185.4	25.5

STATION ALTITUDE 4051.37 FEET MSL  
1 MAY 81 0015 HRS MDT  
ASCENSION NO. 63

UPPER AIR DATA  
12101300003  
LC-37

TABLE 12 CON't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	GM/CURRIC METER	SOUND SPEED KNOTS	DIRECTION DEGREES (TQ)	WIND SPEED KNOTS	INPUT OF REFRACTION
24000.0	410.0	-22.6	-39.3	20.0	570.0	616.7	190.1	24.3	1.000128
24500.0	401.7	-23.8	-40.7	19.2	561.0	615.3	190.6	22.7	1.000126
25000.0	393.4	-25.1	-41.9	19.0	552.3	613.7			1.000124
25500.0	385.2	-26.4	-43.0	19.0	543.8	612.0			1.000122
26000.0	377.2	-27.8	-44.2	19.0	535.4	610.3			1.000120
26500.0	369.3	-29.1	-45.3	19.0	527.1	608.6			1.000118
27000.0	361.5	-29.9	-44.3	22.7	517.6	607.7			1.000116
27500.0	353.9	-30.5	-43.3	27.1	508.1	606.8			1.000114
28000.0	346.4	-31.2	-42.5	31.5	498.7	606.0			1.000112
28500.0	339.0	-32.0	-43.5	30.8	489.8	605.0			1.000110
29000.0	331.8	-33.0	-44.6	29.8	481.3	603.7			1.000108
29500.0	324.6	-34.2	-45.8	29.4	473.2	602.5			1.000106
30000.0	317.6	-35.3	-46.9	29.0	465.3	600.8			1.000104
30500.0	310.8	-36.5	-48.1	28.6	457.5	599.3			1.000102
31000.0	304.1	-37.7	-49.3	28.2	449.8	597.8			1.000101
31500.0	297.4	-38.9	-50.9	26.3**	442.3	596.3			1.000100
32000.0	290.8	-40.1	-53.5	22.0**	434.8	594.7			1.000097
32500.0	284.4	-41.4	-56.4	17.7**	427.5	593.1			1.000095
33000.0	278.6	-42.7	-59.6	13.4**	420.2	591.4			1.000094
33500.0	271.9	-43.9	-63.6	9.1**	413.2	589.8			1.000092
34000.0	265.8	-45.2	-69.2	4.8**	406.2	588.2			1.000091
34500.0	259.9	-46.5	-84.8	.5**	399.4	586.5			1.000089
35000.0	254.0	-47.6			392.3	585.1			1.000087

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL  
 1 MAY 81 0815 HRS NDT  
 ASSEMBLAGE NO. 63

MANDATORY LEVELS  
 1210180063  
 LC-37

TABLE 13

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	AIR DEPOINT CENTIGRAVE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS
850.0	4987.	17.1	8.3	50.	84.4	0.1
800.0	6677.	15.0	6.5	57.	102.7	17.2
750.0	8458.	10.5	4.6	68.	102.2	17.7
700.0	10332.	6.2	1	65.	124.9	9.1
650.0	12315.	2.4	-2.7	69.	125.4	9.4
600.0	14425.	-1.8	-7.8	64.	122.3	21.5
550.0	16675.	-6.7	-13.0	61.	140.2	16.6
500.0	19091.	-12.6	-26.2	31.	181.5	17.8
450.0	21704.	-17.4	-33.1	24.	161.7	28.7
400.0	24562.	-24.0	-41.0	19.	191.0	22.4
350.0	27709.	-30.9	-42.9	29.		
300.0	31246.	-38.4	-50.0	28.		
250.0	35270.	-46.3				

GEODETIC COORDINATES  
 32.40175 LAT DEG  
 106.31232 LON DEG

STATION ALTITUDE 4051.00 FEET MSL  
 1 MAY 81 0815 HRS ADT  
 ASCENSION NO. 28

SIGNIFICANT LEVEL DATA  
 1210050028  
 JAILLEN  
 TABLE 14

GEODETIC COORDINATES  
 33.16712 LAT UEG  
 106.49511 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
875.9	4051.0	20.8	10.3	51.0
850.0	4900.3	18.2	8.7	54.0
807.6	6333.5	15.0	7.1	59.0
798.0	6666.5	15.0	6.6	57.0
768.2	7722.1	12.7	5.4	61.0
700.0	10263.8	6.9	2.0	71.0
665.6	11620.1	3.9	2.6	91.0
657.0	11967.9	3.4	•6	82.0
647.8	12344.3	2.9	-1.6	72.0
595.8	14554.6	-2.0	-5.0	80.0
587.2	14934.9	-2.4	-5.4	80.0
561.8	16084.2	-5.3	-8.5	76.0
520.6	18n37.6	-9.3	-14.8	64.0
500.0	19060.5	-11.5	-18.1	58.0
480.6	20056.0	-13.0	-21.9	47.0
473.2	20444.1	-14.3	-24.4	42.0
465.6	20847.7	-14.8	-27.8	32.0
458.0	21257.4	-15.0	-29.4	28.0
406.8	24165.4	-22.3	-33.2	36.0
400.0	24573.2	-22.1	-33.3	35.0
358.6	27180.1	-29.2	-40.6	32.0
345.0	28085.3	-31.4	-42.5	32.0
325.8	29413.4	-33.8	-44.7	32.0

STATION ALTITUDE 4051.00 FEET MSL  
1 MAY 81  
ASCENSION NO. 2815 HRS MDT

UPPER AIR DATA  
1210030028  
JALLEN  
TABLE 15

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (IN) DATA	WIND SPEED KNOTS	INDEX OF REFRACTION
4051.0	875.9	20.8	10.3	51.0	1032.4	669.7	360.0	9.9
4500.0	862.1	19.4	9.5	52.6	1021.2	668.1	27.6	9.1
5000.0	847.0	18.0	8.6	54.3	1008.4	666.4	56.2	10.7
5500.0	832.0	16.9	8.1	56.1	994.5	665.1	74.0	14.2
6000.0	817.3	15.7	7.5	57.8	980.8	663.8	64.4	17.9
6500.0	802.8	15.0	6.8	59.8	966.0	662.9	92.6	19.8
7000.0	788.5	14.3	6.2	58.3	951.3	662.0	97.9	19.9
7500.0	774.4	13.2	5.6	60.2	937.9	660.7	101.2	16.4
8000.0	760.4	12.1	5.0	62.1	924.8	659.4	99.8	12.4
8500.0	746.6	10.9	4.4	64.1	911.7	658.0	88.7	8.0
9000.0	733.1	9.8	3.8	66.0	898.9	656.7	65.7	7.8
9500.0	719.8	8.6	3.1	68.0	886.3	655.3	86.5	8.4
10000.0	706.8	7.5	2.4	70.0	873.9	653.9	91.7	8.4
10500.0	693.9	6.4	2.2	74.5	861.4	652.6	97.6	8.1
11000.0	681.1	5.3	2.4	81.9	848.8	651.4	111.8	6.5
11500.0	668.6	4.2	2.6	89.2	836.4	650.1	134.9	5.9
12000.0	656.2	3.4	4	91.1	823.7	649.0	159.9	7.3
12500.0	644.0	2.6	-1.9	72.6	811.2	647.9	173.0	8.6
13000.0	631.9	1.4	-2.6	74.4	799.3	646.5	181.3	9.6
13500.0	620.1	0.3	-3.4	76.2	787.5	645.2	171.0	10.3
14000.0	608.4	-0.8	-4.1	78.0	776.0	643.9	159.7	11.6
14500.0	597.0	-1.9	-4.9	79.8	764.6	642.5	150.0	15.4
15000.0	585.7	-2.6	-5.5	79.9	752.1	641.7	145.9	18.6
15500.0	574.6	-3.8	-6.9	79.0	741.4	640.1	146.5	20.8
16000.0	563.6	-5.1	-8.3	78.1	730.9	638.5	148.0	21.9
16500.0	552.8	-6.2	-9.8	75.0	719.8	637.2	150.2	22.2
17000.0	542.1	-7.2	-11.4	71.4	708.8	635.9	153.0	22.0
17500.0	531.6	-8.2	-13.1	67.9	697.9	634.6	157.3	21.8
18000.0	521.4	-9.2	-14.7	64.3	687.2	633.4	160.3	21.7
18500.0	511.2	-10.3	-16.3	61.3	676.6	632.0	162.0	22.7
19000.0	501.2	-11.4	-17.9	58.4	666.2	630.7	162.0	24.1
19500.0	491.3	-12.2	-19.7	53.1	655.2	629.7	166.1	25.5
20000.0	481.7	-12.9	-21.7	47.6	644.2	628.7	169.0	26.9
20500.0	472.1	-14.4	-24.8	40.6	635.2	626.9	172.3	27.4
21000.0	462.8	-14.9	-29.3	30.5	623.9	620.2	174.0	27.8
21500.0	453.5	-15.6	-29.6	28.7	613.2	625.3	171.2	26.2
22000.0	444.3	-16.9	-30.3	30.0	603.7	623.8	166.9	24.3
22500.0	435.4	-18.1	-30.9	31.4	594.5	622.3	160.2	21.8
23000.0	426.6	-19.4	-32.6	32.8	585.4	620.7	157.2	20.2
23500.0	418.0	-20.6	-32.3	34.2	576.4	619.2	153.7	19.3

STATION ALTITUDE 4051.00 FFEI MSL  
 1 MAY 81 0815 HRS MDT  
 ASCENSION NO. 28

UPPER AIR DATA  
 12100300ZB  
 JALLFN  
 TABLE 15 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPNT CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METER KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION	
4000.0	409.6	-21.9	-33.0	35.5	567.6	617.6	163.0	17.7	1.000129
24500.0	401.2	-22.1	-33.3	35.2	556.6	617.3	175.0	15.8	1.000126
25000.0	392.9	-23.5	-34.5	34.5	547.6	615.9	186.8	14.8	1.000124
25500.0	384.8	-24.6	-35.9	33.9	539.2	614.2	202.8	15.0	1.000122
26000.0	376.8	-26.0	-37.3	33.4	530.9	612.5	210.2	18.1	1.000120
26500.0	369.0	-27.3	-38.7	32.8	522.6	610.6	211.2	22.8	1.000118
27000.0	361.3	-28.7	-40.1	32.2	514.8	609.1	212.2	27.9	1.000116
27500.0	353.7	-30.0	-41.3	32.0	506.7	607.6	213.0	33.1	1.000114
28000.0	346.3	-31.2	-42.4	32.0	498.5	606.0	211.7	36.3	1.000112
28500.0	338.9	-32.1	-43.2	32.0	489.8	604.8	1.000110		
29000.0	331.7	-33.1	-44.0	32.0	481.2	603.7			1.000108

GEODETIC COORDINATES  
 53.16712 LAT DEG  
 106.49511 LON DEG

STATION ALTITUDE 4051.00 FEET MSL  
 1 MAY 81  
 ASCENSION NO. 28

MANDATORY LEVELS  
 1210030020  
 JALLEN

TABLE 16

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE			REL.HUM. PERCENT	WIND DATA	
		DEGREES	AIR DEWPNT	CENTIGRAVE		DIRECTION DEGREES (TN)	SPEED KNOTS
450.0	4897.	18.2	8.7	54.	51.2	10.2	
800.0	6592.	15.0	6.7	57.	94.0	20.2	
750.0	8376.	11.2	4.6	64.	92.4	9.1	
700.0	10254.	6.9	2.0	71.	94.3	8.4	
650.0	12241.	3.0	-1.1	74.	168.1	8.2	
600.0	14355.	-1.6	-4.7	79.	152.1	14.3	
550.0	16611.	-6.4	-10.2	74.	151.0	22.2	
500.0	19035.	-11.5	-18.1	58.	163.1	24.3	
450.0	21663.	-16.1	-29.9	29.	169.9	25.6	
400.0	24534.	-22.1	-33.3	35.	174.4	15.6	
350.0	27701.	-30.6	-41.8	32.	212.6	34.9	

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

STATION ALTITUDE: 4126.59 FEET MSL  
 1 MAY 81 0815 HRS MDT  
 ASCENSION NO. 77

SIGNIFICANT LEVEL DATA  
 1210010077  
 HOLLOWMAN  
 TABLE 17

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES	AIR DEWPONT DEGREES	CENTIGRADE	REL.HUM. PERCENT
875.6	4126.6	18.9	8.6	51.0	
865.8	4444.7	19.7	8.1	47.0	
850.0	4966.0	19.7	8.1	47.0	
759.2	8127.7	13.3	3.4	51.0	
740.6	8812.0	11.7	2.5	53.0	
712.0	9890.3	8.8	3.4	69.0	
700.0	10352.4	7.6	2.3	69.0	
647.4	12453.3	3.0	-1.3	70.0	
591.6	14829.8	-3.1	-4.9	87.0	
582.3	15243.4	-2.4	-6.0	76.0	
528.6	17744.2	-8.2	-12.5	71.0	
520.6	18133.7	-8.5	-15.3	58.0	
500.0	19158.9	-11.2	-17.6	59.0	
491.3	19601.4	-12.2	-18.5	59.0	
477.7	20306.2	-13.2	-33.0	17.0	
454.6	21541.5	-15.8	-37.8	13.0	
436.0	22573.1	-18.0	-39.6	13.0	
400.0	24674.0	-22.4	-39.1	20.0	
353.0	27649.6	-30.6	-46.5	18.0	
314.8	30304.3	-35.5	-50.3	20.0	
300.0	31402.5	-37.8			
285.0	32558.0	-41.3			
250.0	35445.9	-48.0			
225.4	37670.0	-53.2			
205.8	39596.5	-54.2			
200.0	40199.4	-55.1			
192.0	41055.4	-56.4			
178.4	42585.7	-58.0			
169.8	43612.0	-58.0			
165.4	44155.7	-59.3			
150.0	46160.1	-62.2			
137.6	47915.5	-62.8			
122.8	50204.0	-67.1			
115.6	51414.4	-64.5			
108.8	52637.5	-64.2			
100.0	54329.1	-67.0			
95.6	55230.7	-64.7			
83.0	58051.9	-68.0			
77.0	59544.6	-66.2			
70.0	61446.9	-67.3			

STATION ALTITUDE 4126.59 FEET MSL  
1 MAY 81 0815 HRS MDT  
ASCENSION NO. 77

SIGNIFICANT LEVEL DATA  
1210010077  
HOLLOWAY  
TABLE 17 CON'T

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT
62.6	63667.2	-68.1	
55.4	66115.8	-63.9	
53.3	66903.4	-61.1	
50.0	68212.4	-61.9	
43.2	71219.7	-59.3	

GEODETIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

STATION ALTITUDE 4126.59 FEET MSL  
 1 MAY 81 0815 HRS MDT  
 ASCENSION NO. 77

UPPER AIR DATA  
 1210010077  
 HOLLOWMAN  
 TABLE 18

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4126.6	875.6	18.9	8.6	51.0	1039.4	667.4	21.0	1.000281
4500.0	864.1	19.7	8.1	47.0	1023.1	668.3	23.7	1.000276
5000.0	849.0	19.6	8.0	47.0	1005.3	668.2	30.5	1.000272
5500.0	833.9	18.6	7.3	47.7	991.1	667.0	43.8	1.000266
6000.0	819.2	17.6	6.6	48.3	977.1	665.8	108.9	1.000261
6500.0	804.7	16.6	5.8	48.9	963.3	664.6	110.6	1.000256
7000.0	790.4	15.6	5.1	49.6	949.7	663.4	112.2	1.000252
7500.0	776.4	14.6	4.3	50.2	936.3	662.2	111.3	1.000247
8000.0	762.7	13.6	3.6	50.8	923.1	660.9	110.5	1.000242
8500.0	749.0	12.4	2.9	52.1	910.2	659.6	116.9	1.000238
9000.0	735.5	11.2	2.7	55.8	897.7	658.2	125.0	1.000235
9500.0	722.2	9.8	3.2	63.2	885.5	656.7	139.3	1.000234
10000.0	709.1	8.5	3.2	69.0	873.5	655.2	154.9	1.000231
10500.0	696.2	7.3	2.0	69.1	861.5	653.6	159.7	1.000226
11000.0	683.3	6.2	1.0	69.3	849.1	652.3	163.4	1.000221
11500.0	670.8	5.1	-0.0	69.5	836.9	651.0	164.0	1.000216
12000.0	658.4	4.0	-1.0	69.8	824.9	649.6	164.6	1.000212
12500.0	646.3	2.9	-2.0	70.3	813.1	648.3	165.0	1.000207
13000.0	634.1	1.6	-2.5	73.9	801.6	646.7	165.3	1.000204
13500.0	622.2	1.3	-3.1	77.5	790.3	645.2	159.2	1.000201
14000.0	610.5	-1.0	-3.8	81.1	779.2	643.6	154.8	1.000197
14500.0	598.0	-2.3	-4.5	84.6	768.2	642.1	148.9	1.000194
15000.0	587.8	-2.8	-5.4	82.5	755.4	641.4	145.7	1.000190
15500.0	576.5	-3.0	-6.0	75.5	741.7	641.1	144.2	1.000184
16000.0	565.5	-4.2	-8.0	74.5	730.7	639.7	143.2	1.000180
16500.0	554.7	-5.3	-9.3	73.5	720.0	638.2	144.4	1.000176
17000.0	544.0	-6.5	-10.6	72.5	709.3	636.8	145.6	1.000173
17500.0	533.6	-7.6	-11.9	71.5	698.9	635.4	149.6	1.000169
18000.0	523.3	-8.4	-14.3	62.5	687.6	634.4	155.3	1.000164
18500.0	513.1	-9.5	-16.1	58.4	677.1	633.0	161.7	1.000160
19000.0	503.1	-10.8	-17.2	58.8	667.3	631.4	168.4	1.000157
19500.0	493.3	-12.0	-18.3	59.0	657.2	629.9	175.0	1.000154
20000.0	483.6	-12.8	-24.9	35.2	646.5	628.8	179.9	1.000149
20500.0	474.0	-13.6	-33.7	16.4	636.0	627.7	183.1	1.000144
21000.0	464.6	-14.7	-35.6	14.8	626.0	626.4	185.7	1.000141
21500.0	455.4	-15.7	-37.6	13.1	616.1	625.1	184.1	1.000139
22000.0	446.2	-16.8	-38.6	13.0	606.3	623.8	182.1	1.000136
22500.0	437.3	-17.8	-39.5	13.0	596.6	622.5	179.7	1.000134
23000.0	428.4	-18.9	-39.3	14.4	586.9	621.3	176.7	1.000132
23500.0	419.7	-19.9	-39.1	16.1	577.4	620.0	179.1	1.000130

STATION ALTITUDE 4126.59 FEET MSL  
 1 MAY 81 0815 HRS MDT  
 ASCENSION NO. 77

UPPER AIR DATA  
 1210010077  
 HOLLOWMAN

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	411.2	-21.0	39.1	17.8	568.0	618.7	183.4	14.4
24500.0	402.9	-22.0	39.1	19.4	558.8	617.4	192.7	13.6
25000.0	394.6	-23.2	39.9	19.8	549.9	615.9	204.0	14.0
25500.0	386.4	-24.5	41.2	19.4	541.2	614.3	212.2	15.9
26000.0	378.3	-25.8	42.4	19.1	532.7	612.8	215.7	19.3
26500.0	370.5	-27.1	43.7	18.8	524.4	611.2	217.8	22.8
27000.0	362.8	-28.3	44.9	18.4	516.2	609.6	217.6	26.8
27500.0	355.2	-29.6	46.2	18.1	508.1	608.0	217.7	30.7
28000.0	347.7	-30.7	47.0	18.3	499.6	606.6	213.7	34.2
28500.0	340.3	-31.8	47.7	18.6	491.0	605.3	209.9	37.7
29000.0	333.0	-32.8	48.4	19.0	482.6	604.0	206.6	39.8
29500.0	325.9	-33.8	49.2	19.4	474.4	602.7	203.4	40.7
30000.0	319.0	-34.9	49.9	19.8	466.3	601.4	201.1	41.4
30500.0	312.1	-35.9	52.3	16.4***	458.3	600.1	201.3	40.7
31000.0	305.3	-37.0	52.7	7.3**	450.3	598.7	201.4	40.0
31500.0	298.7	-38.1	58.1		442.7	597.3	203.2	39.6
32000.0	292.1	-39.6			435.8	595.4	205.2	39.3
32500.0	285.7	-41.1			429.0	593.4	206.7	40.0
33000.0	279.3	-42.3			421.6	591.9	207.9	41.2
33500.0	273.1	-43.5			414.2	590.4	208.8	43.0
34000.0	267.0	-44.6			407.0	588.9	209.4	45.4
34500.0	261.0	-45.8			399.9	587.4	209.4	47.2
35000.0	255.1	-47.0			392.9	585.9	207.4	47.4
35500.0	249.4	-48.1			386.1	584.4	205.4	47.6
36000.0	243.6	-49.3			379.1	582.9	202.5	47.0
36500.0	238.0	-50.5			372.4	581.4	199.4	46.4
37000.0	232.5	-51.6			365.7	579.8	199.0	47.9
37500.0	227.2	-52.8			359.2	578.3	200.7	50.9
38000.0	221.9	-53.4			351.8	577.5	202.7	53.9
38500.0	216.7	-53.6			343.9	577.2	205.5	56.1
39000.0	211.7	-53.9			336.3	576.9	210.1	58.6
39500.0	206.7	-54.1			328.9	576.5	212.6	57.0
40000.0	201.9	-54.8			322.1	575.7	215.1	54.5
40500.0	197.2	-55.7			315.8	574.5	216.0	53.0
41000.0	192.5	-56.6			309.7	573.3	215.3	52.6
41500.0	187.9	-57.1			303.0	572.7	214.7	51.9
42000.0	183.5	-57.5			296.4	572.1	215.4	49.2
42500.0	179.1	-57.9			290.0	571.5	216.3	46.4
43000.0	174.9	-58.0			283.2	571.4	217.5	43.1
43500.0	170.7	-58.0			276.4	571.4	219.5	39.0

TABLE 18 CON'T

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LON DEG

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FEET MSL  
 1 MAY 81 085 HRS N T  
 ASCENSION NO. 77

UPPER AIR DATA  
 1210010077  
 HOLLOWAN  
 TABLE 18 CON'T

GEO-METRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	INDEX OF REFRACTION
44000.0	166.6	-58.9		271.0	570.2	221.9	34.9	1.000060
44500.0	162.6	-59.8		265.6	569.0	222.6	34.9	1.000059
45000.0	156.7	-60.5		260.1	568.1	222.9	36.5	1.000058
45500.0	154.9	-61.2		254.7	567.1	223.2	38.1	1.000057
46000.0	151.2	-62.0		249.4	566.1	226.0	38.6	1.000056
46500.0	147.5	-62.3		243.7	565.7	228.8	39.2	1.000054
47000.0	145.9	-62.5		238.0	565.4	231.6	38.2	1.000053
47500.0	140.4	-62.7		232.4	565.2	235.0	34.1	1.000052
48000.0	137.0	-63.0		227.1	564.8	239.4	30.1	1.000051
48500.0	133.7	-63.9		222.5	563.5	239.6	26.0	1.000050
49000.0	130.4	-64.8		218.0	562.3	235.4	21.7	1.000049
49500.0	127.2	-65.8		213.6	561.0	229.1	17.7	1.000048
50000.0	124.1	-66.7		209.3	559.7	228.9	14.1	1.000047
50500.0	121.0	-66.5		203.9	560.1	231.8	10.7	1.000045
51000.0	118.0	-65.4		197.9	561.5	237.5	7.3	1.000044
51500.0	115.1	-64.5		192.2	562.8	257.7	5.1	1.000043
52000.0	112.3	-64.4		187.4	562.9	294.5	4.3	1.000042
52500.0	109.5	-64.2		182.7	563.1	317.9	4.6	1.000041
53000.0	106.9	-64.8		178.7	562.3	279.0	3.5	1.000040
53500.0	104.2	-65.6		175.0	561.2	237.9	4.4	1.000039
54000.0	101.7	-66.5		171.3	560.1	237.3	8.1	1.000038
54500.0	99.2	-66.6		167.2	559.9	237.7	12.0	1.000037
55000.0	96.7	-65.3		162.1	561.7	241.8	13.5	1.000036
55500.0	94.3	-65.1		157.9	562.0	247.7	13.5	1.000035
56000.0	92.0	-65.8		154.5	561.0	252.0	13.5	1.000034
56500.0	89.7	-66.5		151.2	560.1	252.8	12.5	1.000034
57000.0	87.5	-67.1		148.0	559.2	253.8	11.5	1.000033
57500.0	85.3	-67.8		144.6	558.2	257.2	11.5	1.000032
58000.0	83.2	-68.5		141.7	557.3	261.3	11.8	1.000032
58500.0	81.2	-67.9		137.7	558.2	266.0	12.2	1.000031
59000.0	79.1	-67.1		133.8	559.3	273.9	12.7	1.000030
59500.0	77.2	-66.3		130.0	560.5	281.2	13.4	1.000029
60000.0	75.3	-66.5		126.9	560.1	261.9	13.4	1.000028
60500.0	73.4	-66.8		123.9	559.7	280.8	13.1	1.000028
61000.0	71.6	-67.0		121.0	559.3	277.6	13.4	1.000027
61500.0	69.8	-67.3		118.2	558.9	272.2	14.8	1.000026
62000.0	68.1	-67.5		115.3	558.7	268.4	16.2	1.000026
62500.0	66.4	-67.7		112.6	558.4	274.4	16.7	1.000025
63000.0	64.7	-67.9		109.9	558.2	280.0	17.4	1.000024
63500.0	63.1	-68.0		107.2	557.9	294.1	16.8	1.000024

STATION ALTITUDE 4126.59 FEET MSL  
 1 MAY 81 0815 HRS MDT  
 ASCENSION NO. 77

UPPER AIR DATA  
 1210010077  
 HOLLOWAY  
 TABLE 18 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	61.6	-67.5		104.3	558.6	313.5	17.1
64500.0	60.1	-66.7		101.3	559.8	330.6	18.6
65000.0	58.6	-65.8		98.4	561.0	346.9	18.3
65500.0	57.1	-65.0		95.6	562.1	2.5	19.5
66000.0	55.7	-64.1		92.9	563.3	9.0	16.2
66500.0	54.4	-62.5		89.9	565.4	14.5	10.4
67000.0	53.0	-61.2		87.2	567.2	27.7	5.2
67500.0	51.8	-61.5		85.2	566.8	19.8	2.6
68000.0	50.5	-61.8		83.3	566.4	283.3	.7
68500.0	49.3	-61.7		81.2	566.6	289.9	1.7
69000.0	48.1	-61.2		79.1	567.1	335.5	4.5
69500.0	47.0	-60.8		77.0	567.7	344.6	7.9
70000.0	45.8	-60.4		75.0	568.3		1.000017
70500.0	44.7	-59.9		73.1	568.9		1.000016
71000.0	43.7	-59.5		71.2	569.5		1.000016

STATION ALTITUDE 4126.59 FEET MSL  
 1 MAY 81 085 HRS MDT  
 ASCENSION NO. 77

MANDATORY LEVELS  
 1210010077  
 HOLLOWMAN  
 TABLE 19

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	AIR DEWPONT CENTIGRADE	REL.HUM. PERCENT	WIND DATA	
					DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4963.	19.7	8.1	47.	29.8	15.2
800.0	6666.	16.3	5.6	49.	111.1	5.5
750.0	8457.	12.5	2.9	52.	116.3	7.0
700.0	10343.	7.6	2.3	69.	158.3	6.6
650.0	12333.	3.2	-1.7	70.	164.9	6.5
600.0	14445.	-2.1	-4.4	84.	149.3	15.1
550.0	16704.	-5.8	-9.9	73.	144.9	21.8
500.0	19133.	-11.2	-17.6	59.	170.5	14.4
450.0	21761.	-16.3	-38.2	13.	182.9	23.2
400.0	24634.	-22.4	-39.1	20.	196.4	13.7
350.0	27800.	-30.4	-46.8	18.	215.1	33.1
300.0	31341.	-37.8			202.7	39.7
250.0	35370.	-48.0			205.6	47.6
200.0	40104.	-55.1			216.0	53.6
175.0	42877.	-58.0			217.3	43.4
150.0	46037.	-62.2			226.8	38.8
125.0	49708.	-66.4			228.2	15.3
100.0	54163.	-67.0			237.6	10.5
80.0	58590.	-67.4			270.1	12.4
70.0	61238.	-67.5			273.1	14.6
60.0	64283.	-66.6			330.0	18.6
50.0	67959.	-61.9			243.1	1.4

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL  
1 MAY 81 0910 HRS PDT  
ASCENSION NO. 309

SIGNIFICANT LEVEL DATA  
1210020309  
WHITE SANDS  
TABLE 20

GEODATIC COORDINATES  
32°40'43" LAT DEG  
106°37'33" LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES DEMPSIUS	RLL HUM. PERCENT
880.0	3989.0	20.8	56.0
850.0	4970.1	17.8	55.0
820.0	5975.9	15.1	58.0
800.4	6650.0	15.3	52.0
761.8	8029.7	12.4	59.0
700.0	10532.7	6.9	76.0
687.2	10831.2	5.8	79.0
633.2	13022.0	2.3	-4.9
589.4	14911.6	-2.3	-7.8
522.4	18023.4	-9.1	-30.9
500.0	19131.8	-12.2	-32.8
490.0	19638.9	-13.2	-29.4
482.2	20040.8	-13.2	-34.3
400.0	24629.1	-23.6	-44.1
378.0	25979.3	-27.5	-44.9
371.0	26421.5	-28.0	-36.4
357.4	27301.0	-29.8	-36.8
337.2	28656.7	-33.2	-41.2
330.8	29099.6	-33.7	-40.9
303.2	31092.1	-39.3	-49.3
300.0	31332.1	-39.9	-50.0
250.0	35374.2	-47.7	-44.0
223.8	37754.6	-52.9	-48.0
213.4	38766.2	-52.8	-49.3
200.0	40138.1	-55.1	-50.0
189.2	41303.0	-56.4	
166.8	43934.9	-57.2	
150.0	46134.2	-60.0	
123.6	50053.5	-67.1	
120.2	50611.8	-64.8	
100.0	54305.4	-66.0	
94.4	55463.7	-64.4	
88.6	56738.0	-66.1	
70.0	61454.4	-66.2	
64.8	62094.7	-67.5	
53.0	67058.2	-60.9	
50.0	68249.7	-62.8	
43.6	71068.8	-58.2	
39.4	73177.2	-58.1	
37.2	74383.9	-54.4	

STATION ALTITUDE 3489.00 FEET ASL  
1 MAY 81 0918 HRS MDT  
ASCENSION NO. 309

SIGNIFICANT LEVEL DATA  
12100-0309  
WHITE SANU  
TABLE 20 CON'T

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE METERS MSL	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	KEL. HUM. PERCENT
30.0	78990.5	-49.7	
23.6	84262.8	-43.1	
21.2	86652.9	-43.4	
20.0	87955.3	-41.8	
16.4	92430.0	-39.5	
14.6	95664.2	-39.7	
13.4	97026.2	-35.1	
11.6	100343.7	-37.3	
10.0	103746.6	-36.7	

STATION ALTITUDE 3969.00 FEET MSL  
1 MAY 81 091A HRS MDT  
ASCENSION NO. 309

UPPER AIR DATA  
1210020304  
WHITE SANUS  
TABLE 21

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. DEWPOINT PERCENT	DENSITY GM/CUBIC METER	SHEDD SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN) KNOTS	INFLUX OF REFRACTION
3989.0	880.0	20.0	11.7	56.0	1036.7	669.9	1.000291
4010.0	879.7	20.8	11.7	56.0	1036.5	669.9	1.000291
"500.0	864.2	19.2	10.1	55.5	1024.1	668.0	1.000273
"500.0	849.1	17.7	8.6	55.1	1011.9	660.1	1.000276
5500.0	834.1	16.4	7.7	56.6	983.8	664.5	1.000270
6000.0	819.3	15.1	6.9	57.8	985.6	663.0	1.000265
6500.0	804.7	15.3	5.8	53.3	967.8	663.0	1.000258
7000.0	790.4	14.6	5.3	53.8	952.9	662.2	1.000253
7500.0	770.2	13.5	5.0	56.3	939.3	661.0	1.000250
8000.0	762.4	12.4	4.6	58.9	926.0	659.8	1.000246
8500.0	740.6	11.3	4.4	62.5	913.0	658.4	1.000243
9000.0	735.0	10.1	4.1	66.2	900.2	657.0	1.000239
9500.0	721.7	8.9	3.7	69.9	887.7	655.6	1.000236
10000.0	706.6	7.7	3.3	73.6	875.3	654.2	1.000232
10500.0	695.7	6.5	2.8	77.0	863.0	652.8	1.000229
11000.0	682.9	5.5	1.9	77.5	850.3	651.6	1.000224
11500.0	670.2	4.7	0.3	72.9	837.3	650.6	1.000217
12000.0	657.8	3.9	-1.4	68.3	824.4	649.5	1.000211
12500.0	645.7	3.1	-3.1	63.8	811.8	648.5	1.000205
13000.0	633.7	2.3	-4.8	59.2	799.3	647.4	1.000199
13500.0	621.8	1.1	-5.5	61.0	787.8	646.0	1.000196
14000.0	610.1	-0.1	-6.2	63.1	776.5	644.5	1.000192
14500.0	590.7	-1.3	-7.0	65.3	765.4	643.1	1.000189
15000.0	587.4	-2.5	-8.0	65.5	754.4	641.0	1.000185
15500.0	576.1	-3.6	-10.8	57.2	743.2	640.2	1.000180
16000.0	565.0	-4.7	-13.8	48.8	732.2	638.8	1.000174
16500.0	554.2	-5.8	-17.0	40.5	721.3	637.4	1.000169
17000.0	543.5	-6.9	-20.7	32.1	710.5	636.0	1.000165
17500.0	532.1	-8.0	-25.0	23.7	699.9	634.6	1.000160
18000.0	522.9	-9.0	-30.6	15.4	689.5	633.2	1.000156
18500.0	512.6	-10.4	-31.7	15.4	679.6	631.5	1.000154
19000.0	502.6	-11.8	-32.6	15.9	669.8	629.9	1.000151
19500.0	492.7	-12.9	-30.2	21.8	659.4	628.6	1.000150
20000.0	482.0	-13.2	-33.7	15.9	647.1	626.2	1.000146
20500.0	473.3	-14.2	-35.3	14.8	636.6	620.9	1.000143
21000.0	463.7	-15.4	-36.3	14.6	626.0	625.0	1.000141
21500.0	454.4	-16.5	-37.4	14.4	616.6	624.2	1.000139
22000.0	445.2	-17.6	-38.5	14.1	606.9	622.8	1.000136
22500.0	436.2	-18.8	-39.6	13.9	597.3	621.4	1.000134
23000.0	427.4	-19.9	-40.6	13.7	587.9	620.0	1.000132

STATION ALTITUDE 3989.00 FEET MSL  
1 MAY 81 0918 HRS MDT  
ASCENSION NO. 309

UPPER AIR DATA  
1210020304  
WHITE SANDS  
TABLE 21 CNT' T

GEODETIC COORDINATES  
32°40'04.3 LAT DEG  
106.37033 LON DEG

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CCUBIC METER	SPD OF SOUND KNOTS	DIRECTION DEGREES(180)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	410.8	-21.0	-41.7	13.5	578.7	616.6	176.4	20.4	1.700150
24000.0	410.4	-22.2	-42.8	13.3	569.6	617.2	177.6	20.9	1.700128
24500.0	404.1	-23.3	-43.9	13.1	560.6	615.8	177.2	22.1	1.700126
25000.0	395.8	-24.7	-44.3	14.1	552.1	614.1	179.6	23.7	1.700124
25500.0	385.7	-26.1	-44.6	15.6	543.6	612.3	183.6	25.6	1.700122
26000.0	377.7	-27.5	-44.3	18.3	535.6	610.6	160.3	26.9	1.700120
26500.0	369.8	-28.2	-36.5	44.5	525.6	609.9	189.5	28.1	1.700119
27000.0	361.0	-29.2	-36.7	47.9	516.8	608.6	194.2	29.2	1.700117
27500.0	354.4	-30.3	-37.5	49.1	508.2	607.2	199.4	30.4	1.700115
28000.0	349.8	-31.6	-39.1	46.9	500.0	605.6	201.4	32.5	1.700113
28500.0	339.5	-32.8	-40.7	44.7	492.0	604.0	202.2	34.7	1.700111
29000.0	332.5	-33.6	-40.9	47.1	483.0	603.0	199.7	36.3	1.700109
29500.0	325.1	-34.6	-42.5	44.4	474.7	601.7	196.3	37.6	1.700107
30000.0	318.0	-35.8	-44.5	39.9	466.7	600.2	195.0	39.8	1.700105
30500.0	311.2	-36.9	-46.6	35.3	458.6	598.8	194.5	42.2	1.700103
31000.0	304.4	-38.1	-48.9	30.8	451.1	597.3	195.4	44.3	1.700101
31500.0	297.7	-39.3			443.5	595.8	196.7	46.2	1.700099
32000.0	291.1	-40.4			435.6	594.4	198.5	47.4	1.700097
32500.0	284.6	-41.4			427.9	593.0	200.5	48.4	1.700095
33000.0	278.3	-42.5			420.3	591.6	203.2	50.8	1.700094
33500.0	272.1	-43.6			412.9	590.2	205.6	53.7	1.700092
34000.0	266.0	-44.7			405.6	588.8	205.5	55.6	1.700090
34500.0	260.1	-45.8			398.5	587.4	204.3	57.3	1.700089
35000.0	254.3	-46.9			391.5	586.0	201.7	56.0	1.700087
35500.0	249.5	-48.0			384.5	584.6	198.5	53.9	1.700086
36000.0	244.8	-49.1			377.5	583.2	198.7	53.3	1.700084
36500.0	239.2	-50.2			370.6	581.8	200.3	53.3	1.700083
37000.0	234.3	-51.3			363.9	580.5	203.3	55.1	1.700081
37500.0	229.5	-52.3			357.5	578.9	199.5	57.6	1.700080
38000.0	224.2	-52.9			349.9	576.2	200.0	59.1	1.700078
38500.0	219.1	-52.3			341.7	578.3	201.5	59.5	1.700076
39000.0	214.1	-53.2			334.3	577.6	203.8	59.3	1.700074
39500.0	209.1	-54.0			327.7	576.7	207.6	57.7	1.700073
40000.0	204.3	-54.9			321.3	575.6	211.9	56.3	1.700072
40500.0	199.6	-55.5			314.6	574.7	210.7	54.0	1.700070
41000.0	194.0	-56.1			308.0	574.0	209.3	51.7	1.700069
41500.0	187.4	-56.5			301.3	573.5	207.7	50.6	1.700067
42000.0	183.0	-56.6			294.4	573.3	206.0	49.9	1.700066
42500.0	176.7	-56.8			287.6	573.1	206.2	48.4	1.700064
43000.0	174.4	-56.9			281.0	572.9	203.7	46.3	1.700063

STATION ALTITUDE 3988.00 FEET MSL  
 1 MAY 81 0918 HRS MDI  
 ASISSION NO. 309

UPPER AIR DATA  
 1210020309  
 WHITE SANDS  
 TABLE 21 CNT' T

GEODETIC COORDINATES  
 32°40.043 LAT LEG  
 106.37033 LONG LEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES CLNT GRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KIOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KIOTS	INDEX OF REFRACTION
43500.0	170.3	-57.1			274.6	572.7	211.3	44.6	1.000001
44000.0	169.3	-57.3			268.3	572.4	213.3	44.5	1.000000
44500.0	162.3	-57.9			262.7	571.5	215.2	44.6	1.000009
45000.0	150.4	-58.6			257.2	570.7	216.1	44.6	1.000007
45500.0	154.7	-59.2			251.8	569.8	216.7	44.6	1.000016
46000.0	151.0	-59.8			246.5	569.0	218.6	42.5	1.000005
46500.0	147.3	-60.7			241.5	567.9	222.4	37.8	1.000004
47000.0	145.7	-61.6			236.6	566.7	227.2	33.4	1.000003
47500.0	140.2	-62.5			231.9	565.5	233.2	27.0	1.000002
48000.0	130.8	-63.4			227.0	564.2	242.7	20.8	1.000005
48500.0	133.5	-64.3			222.6	563.0	252.0	15.9	1.000005
49000.0	130.2	-65.2			218.1	561.8	257.6	11.9	1.000049
49500.0	127.0	-66.1			213.7	560.6	265.5	8.4	1.0000048
50000.0	123.9	-67.0			209.4	559.4	261.0	7.3	1.0000047
50500.0	120.9	-65.3			202.5	561.7	233.2	6.9	1.0000045
51000.0	117.9	-64.9			197.2	562.2	225.7	6.9	1.0000044
51500.0	115.0	-65.1			192.5	561.9	221.5	7.0	1.0000043
52000.0	112.2	-65.3			188.0	561.7	215.6	7.3	1.0000042
52500.0	109.4	-65.4			183.5	561.5	203.7	8.5	1.0000041
53000.0	106.7	-65.6			179.1	561.3	195.0	10.0	1.0000040
53500.0	104.1	-65.7			174.8	561.1	198.5	11.3	1.0000039
54000.0	101.5	-65.9			170.7	560.8	207.5	12.7	1.0000038
54500.0	99.0	-65.7			166.3	561.1	215.1	14.2	1.0000037
55000.0	96.6	-65.0			161.7	562.0	236.9	12.7	1.0000036
55500.0	94.2	-64.4			157.3	562.8	209.4	13.2	1.0000035
56000.0	91.9	-65.1			153.9	561.9	272.6	13.8	1.0000034
56500.0	89.7	-65.8			150.6	561.0	279.0	13.2	1.0000034
57000.0	87.4	-66.1			147.1	560.6	285.8	12.8	1.0000033
57500.0	85.3	-66.1			143.5	560.6	278.9	12.5	1.0000032
58000.0	83.2	-66.1			140.0	560.5	273.6	12.2	1.0000031
58500.0	81.1	-66.1			136.5	560.5	269.1	12.5	1.0000030
59000.0	79.1	-66.1			133.2	560.5	265.2	13.8	1.0000029
59500.0	77.2	-66.2			129.9	560.5	259.2	15.1	1.0000029
60000.0	75.3	-66.2			126.7	560.5	259.0	16.1	1.0000028
60500.0	73.4	-66.2			123.6	560.5	260.6	16.8	1.0000028
61000.0	71.6	-66.2			120.5	560.5	262.1	17.5	1.0000027
61500.0	69.8	-66.2			117.6	560.4	275.7	15.5	1.0000026
62000.0	68.1	-66.7			114.9	559.8	292.2	14.6	1.0000026
62500.0	66.4	-67.1			112.3	559.2	303.6	14.4	1.0000025
63000.0	64.8	-67.5			109.7	558.7	306.0	13.7	1.0000024

STATION ALTITUDE 3489.00 FEET MSL  
1 MAY 81 0918 HRS MDT  
ASCENSION NO. 399

UPPER AIR DATA  
1210020309  
WHITE SANDS  
TABLE 21 CON'T

GEODETIC COORDINATES  
32.40043 LAT  $\delta$   
106.37033 LON  $\lambda$

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
3500.0	63.2	-66.7		106.6	559.8	310.9	13.1
3400.0	61.7	-65.9		103.6	560.9	309.8	10.8
3450.0	60.1	-65.1		100.7	562.0	307.6	7.9
3500.0	59.7	-64.2		97.9	563.1	302.6	5.0
3550.0	57.0	-63.4		95.1	564.2	317.2	3.3
3600.0	55.8	-62.6		92.4	565.3	353.5	2.6
3650.0	54.5	-61.8		89.8	566.4	31.0	3.2
3700.0	53.2	-61.0		87.3	567.4	26.3	4.0
3750.0	51.9	-61.6		85.4	569.6	22.0	4.8
3800.0	50.6	-62.4		83.7	565.6	17.0	5.7
3850.0	49.4	-62.4		81.6	565.6	19.9	6.1
3900.0	48.2	-61.6		79.4	568.7	23.1	6.6
3950.0	47.1	-60.8		77.2	567.8	25.0	7.0
4000.0	45.9	-59.9		75.0	568.8	25.8	6.7
4050.0	44.8	-59.1		73.0	569.9	25.6	6.4
4100.0	43.7	-58.3		70.9	571.0	20.0	6.1
4150.0	42.7	-58.2		69.2	571.2	30.5	6.2
4200.0	41.7	-58.2		67.6	571.2	35.9	6.3
4250.0	40.7	-58.1		65.9	571.3	37.6	6.3
4300.0	39.7	-58.1		64.4	571.3	41.4	6.4
4350.0	38.8	-57.1		62.6	572.6	45.1	6.4
4400.0	37.9	-55.6		60.7	574.6	47.1	6.4
4450.0	37.0	-54.3		58.9	576.4	47.3	6.2
4500.0	36.1	-53.8		57.4	577.0	47.5	6.1
4550.0	35.3	-53.3		55.9	577.7	40.5	5.6
4600.0	34.5	-52.8		54.5	578.4	26.2	5.1
4650.0	33.7	-52.2		53.1	579.0	9.9	4.9
4700.0	32.9	-51.7		51.8	579.7	9.8	4.7
4750.0	32.2	-51.2		50.5	580.4	18.5	4.5
4800.0	31.4	-50.7		49.2	581.0	27.9	4.3
4850.0	30.7	-50.2		48.0	581.7	40.7	4.6
4900.0	30.0	-49.7		46.7	582.4	63.7	5.6
4950.0	29.3	-49.1		45.6	583.2	75.3	6.8
5000.0	28.7	-48.6		44.4	584.0	31.6	6.0
5050.0	28.0	-47.8		43.3	584.8	85.9	6.2
5100.0	27.4	-47.2		42.2	585.6	69.2	10.4
5150.0	26.8	-46.6		41.1	586.4	98.2	11.2
5200.0	26.2	-45.9		40.1	587.2	105.4	12.1
5250.0	25.6	-45.3		39.1	588.0	109.6	13.1
5300.0	25.0	-44.7		38.1	588.9	115.4	13.1

STATION ALTITUDE 3989.00 FEET MSL  
1 MAY 81 0918 HRS MDT  
ASCENSION IS. 509

WEATHER AIR DATA  
1210020309  
WHITE SANDS  
TABLE 21 CNT'D

GEODETIC COORDINATES  
32°40'04.3 LAT N  
106°37'03.3 LONG E

GEOMETRIC ALITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF WIND DATA MILES/HOUR DEGREES (TM)	WIND DIRECTION DEGREES (TM)	INDEX OF REFRACTION
6500.0	24.4	-44.1	37.2	589.7	121.6	12.7	1.0000008
8400.0	23.9	-43.4	36.2	590.5	128.1	12.5	1.0000008
84500.0	23.4	-43.1	35.4	590.9	129.6	12.0	1.0000008
85000.0	23.8	-43.2	34.6	590.6	128.9	11.2	1.0000008
85500.0	23.3	-43.3	33.8	590.7	127.8	10.4	1.0000008
86000.0	21.8	-43.3	33.1	590.6	129.2	9.0	1.0000007
86500.0	21.3	-43.4	32.4	590.5	133.9	7.1	1.0000007
87000.0	20.9	-43.0	31.6	591.1	141.4	5.3	1.0000007
87500.0	20.4	-42.4	30.8	591.8	139.1	3.8	1.0000007
88000.0	20.0	-41.8	30.1	592.6	108.9	3.1	1.0000007
88500.0	19.5	-41.5	29.4	592.9	75.9	3.5	1.0000007
89000.0	19.1	-41.3	28.7	593.2	66.7	5.4	1.0000010
89500.0	18.7	-41.0	28.0	593.0	74.7	9.1	1.0000010
90000.0	18.3	-40.7	27.4	593.3	78.1	12.8	1.0000006
90500.0	17.9	-40.5	26.8	594.2	80.9	16.1	1.0000006
91000.0	17.5	-40.2	26.1	594.6	88.3	17.6	1.0000006
91500.0	17.1	-40.0	25.5	594.6	90.9	19.2	1.0000006
92000.0	16.7	-39.7	24.9	595.2	94.4	20.8	1.0000006
92500.0	16.3	-39.5	24.4	595.5	94.2	21.4	1.0000005
93000.0	16.0	-39.5	23.8	595.4	94.0	21.9	1.0000005
93500.0	15.6	-39.6	23.3	595.4	93.9	22.5	1.0000005
94000.0	15.3	-39.6	22.8	595.3	93.7	22.7	1.0000005
94500.0	15.0	-39.7	22.3	595.3	93.5	22.7	1.0000005
95000.0	14.6	-39.7	21.8	595.2	93.4	22.7	1.0000005
95500.0	14.3	-38.7	21.3	595.3	93.2	22.7	1.0000005
96000.0	14.0	-37.5	20.7	593.0	93.0	23.2	1.0000005
96500.0	13.7	-36.3	20.2	599.5	92.7	23.7	1.0000004
97000.0	13.4	-35.2	19.6	601.0	92.4	24.3	1.0000004
97500.0	13.1	-35.4	19.2	600.7	92.5	24.9	1.0000004
98000.0	12.8	-35.7	18.8	600.3	93.1	25.7	1.0000004
98500.0	12.6	-36.1	18.5	599.8	93.7	26.5	1.0000004
99000.0	12.3	-36.4	18.1	599.4	94.3	27.3	1.0000004
99500.0	12.0	-36.7	17.7	599.0	92.2	27.0	1.0000004
100000.0	11.8	-37.1	17.4	598.6	88.0	26.3	1.0000004
100500.0	11.5	-37.3	17.0	598.5	84.8	25.7	1.0000004
101000.0	11.3	-37.2	16.6	598.4	80.8	25.2	1.0000004
101500.0	11.0	-37.1	16.3	598.5	81.0	25.0	1.0000004
102000.0	10.8	-37.0	15.9	598.7	80.0	24.8	1.0000004
102500.0	10.6	-36.9	15.6	598.8	79.0	24.6	1.0000004
103000.0	10.3	-36.8	15.2	598.9	78.0	24.4	1.0000003

STATION ALTITUDE 3989.00 FEET MSL  
1 MAY 31 0918 HRS MDT  
ASCENSION 110. 309

UPPER AIR DATA  
1210020309  
WHITE SANDS  
TABLE 21 CON'T

GEODETIC COORDINATES  
32.40043 LAT deg  
106.37033 LON deg

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (ST)	INDEX OF REFRACTION
103500.0	10.1	-36.7	14.9	599.0	14.9	1.000003

STATION ALTITUDE 3989.00 FEET MSL  
1 MAY 81 0918 HRS MDT  
ASCENSION NO. 309

MANDATORY LEVELS  
1210020309  
WHITE SANDS  
TABLE 22 CUNT

GEODETIC COORDINATES  
32°40'43" LAT UEG  
106°37'03" LONG UEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR DEGREES CENTIGRADE	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	WIND DATA	
					DIRECTION DEGREES (TN)	SPEED KNOTS
450.0	4966.	17.9	8.6	55.	112.2	4.8
480.0	6659.	15.3	5.5	52.	94.2	13.3
510.0	8443.	11.4	4.4	62.	105.6	16.3
540.0	10322.	6.9	3.0	76.	118.1	11.3
570.0	12311.	3.4	-2.4	65.	123.9	10.9
600.0	14278.	-1.2	-6.9	65.	132.9	23.4
550.0	16684.	-6.2	-18.4	37.	161.5	16.4
500.0	19115.	-12.2	-32.8	16.	179.9	19.6
450.0	21726.	-17.0	-37.9	14.	175.8	23.0
400.0	24588.	-23.6	-44.1	13.	177.1	22.3
350.0	27740.	-31.0	-38.4	48.	201.0	31.5
300.0	31270.	-38.9			196.2	45.5
250.0	35297.	-47.7			199.4	54.5
200.0	40041.	-55.1			211.0	55.8
175.0	42424.	-56.9			208.3	46.7
150.0	45010.	-60.0			219.3	41.4
125.0	49686.	-66.7			257.1	7.7
100.0	54137.	-66.0			211.6	13.6
80.0	58587.	-66.1			265.5	13.1
70.0	61243.	-66.2			273.4	15.8
60.0	64304.	-65.0			307.0	7.9
50.0	67993.	-62.8			17.9	5.9
40.0	72573.	-58.1			40.0	6.3
30.0	78653.	-49.7			62.3	5.4
25.0	82612.	-44.7			114.7	13.1
20.0	87542.	-41.8			115.1	5.2
15.0	93979.	-39.7			93.0	7.2
10.0	103161.	-36.7			72.7	

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL  
 1 MAY 81 0925 HRS MDT  
 ASCESSION NO. 29

SIGNIFICANT LEVEL DATA

1210030029

JALLEN

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

TABLE 23

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT
876.4	4051.0	22.9	42.0
850.0	4923.7	21.0	48.0
769.4	7717.6	12.8	66.0
740.4	8777.8	11.9	60.0
700.0	10311.5	7.6	67.0
636.6	12863.1	2.4	94.0
600.6	14399.9	-2.1	87.0
557.0	16361.7	-4.9	82.0
523.0	17983.5	-7.6	53.0
511.2	18566.3	-9.0	-20.4
500.0	19129.1	-10.1	-26.3
458.0	21335.1	-14.4	-32.3
427.2	23061.4	-17.3	-31.4
400.0	24669.0	-22.0	-35.5
374.8	26233.8	-25.4	-37.5
360.6	27153.9	-26.7	-40.0
300.0	31429.4	-37.6	-50.6
250.0	35492.5	-46.6	24.0
219.6	38247.6	-52.8	
209.0	39340.6	-52.4	
200.0	40273.0	-54.9	
193.6	40156.4	-56.0	
165.0	44284.8	-58.9	
150.0	46244.6	-61.5	
134.6	47856.1	-62.6	
122.6	50324.7	-67.0	
118.0	51093.9	-62.9	
100.0	54438.2	-65.2	
81.6	58515.7	-66.2	
76.0	61581.9	-66.5	
62.0	64004.6	-67.0	
50.0	68349.2	-61.8	
37.2	74447.9	-58.4	
30.0	7902.1	-50.7	
20.0	87861.0	-44.7	
16.4	92316.1	-38.6	
13.7	96420.7	-37.3	

STATION ALTITUDE 1051.00 FEET MSL  
 1 MAY 61 0925 HRS MDT  
 ASCENSION NO. 29

UPPER AIR DATA  
 1210030029  
 JAULEN  
 TABLE 24

GEODETIC COORDINATES  
 33°16'712 LAT LEG  
 106°49'511 LON DEG

GEOGRAPHIC ALTITUDE (MSL FEET)	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	REL. HUM. GM/CURIC METER	SOUND SPEED KNOTS	WIND DATA DIRECTION DEGREES (TN)	INFLUX OF REFRACTION
4051.0	876.4	22.9	9.3	42.0	1026.0	672.0	10.0
4500.0	862.7	21.9	9.5	45.1	1013.2	671.0	27.6
5000.0	847.7	20.8	9.5	48.5	999.4	669.7	36.5
5500.0	832.7	19.3	9.1	51.7	986.7	668.0	41.2
6000.0	818.0	17.8	8.7	54.9	974.2	666.3	48.7
6500.0	805.5	16.4	8.1	58.2	961.9	664.6	58.1
7000.0	789.3	14.9	7.6	61.4	949.8	662.9	66.3
7500.0	775.4	13.4	6.9	64.6	938.0	661.1	78.7
8000.0	761.6	12.6	6.0	64.4	924.2	660.0	86.5
8500.0	747.9	12.0	5.0	61.6	909.2	659.5	92.7
9000.0	734.4	11.3	4.0	61.0	895.7	658.4	96.1
9500.0	721.1	9.9	3.2	63.3	884.0	656.7	99.4
10000.0	708.0	8.5	2.4	65.6	872.4	655.0	99.5
10500.0	695.1	7.2	1.9	69.0	860.4	653.6	99.7
11000.0	682.3	6.2	2.0	74.3	847.5	652.4	103.1
11500.0	669.7	5.2	1.9	79.6	834.9	651.2	107.4
12000.0	657.4	4.2	1.8	84.9	822.5	650.1	120.7
12500.0	645.3	3.1	1.7	90.2	810.3	648.9	135.1
13000.0	633.3	2.0	1.0	93.4	798.7	647.5	142.9
13500.0	621.4	0.5	-7	91.1	788.2	645.6	143.3
14000.0	609.8	-0.9	-2.5	88.8	777.9	643.8	143.7
14500.0	598.3	-2.2	-4.1	86.7	767.2	642.1	145.3
15000.0	586.9	-3.0	-5.0	85.5	754.7	641.2	147.3
15500.0	575.7	-3.7	-5.9	84.2	742.4	640.4	159.7
16000.0	564.8	-4.4	-6.8	92.9	730.3	639.5	168.1
16500.0	554.0	-5.1	-8.1	79.5	718.5	638.5	169.6
17000.0	542.4	-6.0	-10.4	70.6	707.1	637.4	169.7
17500.0	532.9	-6.8	-12.9	61.6	695.9	636.3	168.0
18000.0	522.7	-7.6	-15.6	52.6	684.9	635.2	171.0
18500.0	512.5	-8.8	-19.8	40.6	674.9	635.7	176.8
19000.0	502.5	-9.8	-24.8	29.2	664.5	632.3	181.2
19500.0	492.7	-10.8	-27.3	24.2	653.9	631.1	182.3
20000.0	482.0	-11.8	-28.7	23.0	643.5	629.9	182.0
20500.0	473.5	-12.8	-30.0	21.9	633.2	628.8	181.1
21000.0	464.1	-13.7	-31.4	20.8	623.1	627.6	179.0
21500.0	455.0	-14.7	-32.2	20.8	613.0	626.4	179.7
22000.0	446.9	-15.5	-31.8	23.1	602.7	625.4	174.1
22500.0	437.0	-16.4	-31.6	25.4	592.6	624.4	172.0
23000.0	428.3	-17.2	-31.4	27.7	582.7	623.4	171.5
23500.0	419.6	-18.6	-32.5	28.0	574.0	621.7	172.2

STATION ALTITUDE 4051.00 FEET MSL  
 1 MAY 81 0925 HRS NDT  
 ASCENSION NO. 29

UPPER AIR DATA  
 1210030029  
 JALLEN  
 TABLE 24 CON'T

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPPOINT DEGREES	REL.HUM. PERCENT	GM/CURIC METER	SOUND SPEED KNOTS	DIRECTION DEGREES TN	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	411.1	-20.0	-33.8	28.0	565.6	619.9	179.3	18.6	1.000128
24500.0	402.8	-21.5	-35.1	28.0	557.4	618.1	185.7	19.6	1.000126
25000.0	394.5	-22.7	-35.9	28.6	548.7	616.6	192.9	22.8	1.000124
25500.0	386.4	-23.8	-36.5	29.6	539.7	615.2	198.1	26.4	1.000122
26000.0	378.5	-24.9	-37.2	30.6	530.9	613.9	199.4	30.3	1.000120
26500.0	370.6	-25.8	-38.2	29.8	521.8	612.8	199.9	34.2	1.000118
27000.0	362.9	-26.5	-39.6	27.7	512.5	611.9	199.3	37.2	1.000115
27500.0	355.3	-27.6	-40.8	26.8	503.9	610.5	198.5	39.8	1.000113
28000.0	347.7	-28.9	-42.1	26.4	495.8	609.0	198.1	41.2	1.000111
28500.0	340.3	-30.1	-43.3	26.1	487.8	607.4	197.9	41.8	1.000109
29000.0	333.1	-31.4	-44.6	25.7	479.9	605.8	197.3	41.2	1.000108
29500.0	326.0	-32.7	-45.8	25.4	472.2	604.2	196.2	39.5	1.000106
30000.0	319.0	-34.0	-47.0	25.0	464.6	602.5	195.2	37.4	1.000104
30500.0	312.2	-35.2	-48.3	24.7	457.1	600.9	194.3	34.7	1.000102
31000.0	305.6	-36.5	-49.5	24.3	449.8	599.3	196.2	33.6	1.000101
31500.0	299.1	-37.8	-50.9	23.6**	442.5	597.7	204.8	37.3	1.000099
32000.0	292.4	-38.9	-53.0	20.6**	434.8	596.3	211.8	41.6	1.000097
32500.0	285.9	-40.0	-55.2	17.7**	427.2	594.9	209.0	43.5	1.000095
33000.0	279.6	-41.1	-57.6	14.7**	419.7	593.5	206.1	45.3	1.000094
33500.0	273.4	-42.3	-60.2	11.8**	412.3	592.1	202.2	45.2	1.000092
34000.0	267.3	-43.5	-63.3	8.8**	405.1	590.6	197.6	44.3	1.000090
34500.0	261.4	-44.4	-67.1	5.9**	398.1	589.2	197.1	44.6	1.000089
35000.0	255.6	-45.5	-72.8	2.9**	391.1	587.8	200.4	45.8	1.000087
35500.0	249.9	-46.6			384.3	586.4	201.5	46.9	1.000086
36000.0	244.2	-47.7			377.4	584.9	199.0	47.5	1.000084
36500.0	238.6	-48.8			370.5	583.5	196.9	48.3	1.000083
37000.0	233.1	-49.9			363.8	582.0	197.3	49.6	1.000081
37500.0	227.8	-51.1			357.3	580.6	197.7	50.9	1.000080
38000.0	222.5	-52.2			350.8	579.1	201.1	54.4	1.000078
38500.0	217.4	-52.7			343.6	578.4	204.2	58.2	1.000077
39000.0	212.4	-52.5			335.3	578.7	206.8	60.6	1.000075
39500.0	207.4	-52.8			328.0	578.3	209.2	62.4	1.000073
40000.0	202.6	-54.2			322.3	576.5	211.3	63.6	1.000072
40500.0	197.9	-55.3			316.3	575.1	212.3	58.1	1.000070
41000.0	193.2	-56.0			310.0	574.0	213.5	52.7	1.000069
41500.0	188.6	-56.5			303.2	573.5	214.0	48.2	1.000068
42000.0	184.1	-56.9			296.6	572.9	215.8	44.4	1.000066
42500.0	179.8	-57.3			290.2	572.3	216.6	41.3	1.000065
43000.0	175.5	-57.8			283.9	571.7	215.6	41.1	1.000063
43500.0	171.3	-58.2			277.7	571.1	214.6	40.9	1.000062

\*\* AT LEAST ONE RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE: 4051.00 FEET MSL  
 1 MAY 81 0925 HRS MDT  
 ASCENSION NO. 29

UPPER AIR DATA  
 1210030029  
 JALLEN  
 TABLE 24 CON'T

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES	REL.HUM. PERCENT	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	167.3	-58.7				271.7	570.6	213.7	39.8	1.000060
44500.0	163.3	-59.2				265.8	569.9	212.8	38.5	1.000059
45000.0	159.4	-59.8				260.3	569.0	212.7	37.9	1.000058
45500.0	155.5	-60.5				254.8	568.1	214.7	39.3	1.000057
46000.0	151.8	-61.2				249.5	567.2	216.7	40.7	1.000056
46500.0	146.1	-61.7				244.0	566.5	218.2	40.2	1.000054
47000.0	144.5	-62.0				238.5	566.1	219.7	39.0	1.000053
47500.0	141.0	-62.4				233.1	565.6	220.8	37.2	1.000052
48000.0	137.6	-62.9				228.0	564.9	220.0	31.8	1.000051
48500.0	134.2	-63.7				223.3	563.8	218.9	26.5	1.000050
49000.0	130.9	-64.6				218.8	562.5	218.1	22.1	1.000049
49500.0	127.7	-65.5				214.3	561.3	217.6	18.4	1.000048
50000.0	124.6	-66.4				210.0	560.1	216.9	14.6	1.000047
50500.0	121.5	-66.1				204.5	560.6	218.6	11.0	1.000046
51000.0	118.6	-63.4				196.9	564.2	222.0	7.4	1.000044
51500.0	115.7	-63.2				191.9	564.5	218.2	4.9	1.000043
52000.0	112.8	-63.5				187.5	564.1	196.4	4.1	1.000042
52500.0	110.1	-63.9				183.2	563.6	170.0	4.1	1.000041
53000.0	107.4	-64.2				179.0	563.1	180.7	5.0	1.000040
53500.0	104.8	-64.6				174.9	562.7	190.4	6.2	1.000039
54000.0	102.2	-64.9				170.9	562.2	194.8	6.7	1.000038
54500.0	99.7	-65.2				167.0	561.8	194.7	5.9	1.000037
55000.0	97.2	-65.3				163.0	561.6	194.6	5.1	1.000036
55500.0	94.8	-65.5				159.1	561.4	230.6	6.7	1.000035
56000.0	92.5	-65.6				155.3	561.3	249.8	10.4	1.000035
56500.0	90.2	-65.7				151.5	561.1	257.4	14.2	1.000034
57000.0	88.0	-65.8				147.9	560.9	260.4	17.1	1.000033
57500.0	85.8	-66.0				144.3	560.8	262.6	20.1	1.000032
58000.0	83.7	-66.1				140.9	560.6	267.0	18.5	1.000031
58500.0	81.7	-66.2				137.5	560.4	274.1	15.7	1.000031
59000.0	79.6	-66.2				134.1	560.4	283.1	13.6	1.000030
59500.0	77.7	-66.3				130.8	560.3	286.9	14.7	1.000029
60000.0	75.8	-66.3				127.6	560.2	290.2	15.9	1.000028
60500.0	73.9	-66.4				124.5	560.2	290.4	16.8	1.000028
61000.0	72.1	-66.4				121.5	560.1	287.8	17.5	1.000027
61500.0	70.3	-66.5				118.5	560.0	285.4	18.3	1.000026
62000.0	68.5	-66.6				115.6	559.9	285.2	18.4	1.000026
62500.0	66.9	-66.7				112.8	556.8	285.4	18.4	1.000025
63000.0	65.2	-66.8				110.1	559.0	286.5	18.4	1.000025
63500.0	63.6	-66.9				107.4	559.5	290.7	18.3	1.000024

STATION ALTITUDE 4051.00 FEET MSL  
 1 MAY 81 0925 HRS MDT  
 ASCENSION NO. 29

UPPER AIR DATA  
 1210030029  
 JALLEN  
 TABLE 24 CUN'T

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA KNOTS	INDEX OF REFRACTION
64000.0	62.0	-67.0		104.8	559.4	294.8	18.4	1.000023
64500.0	60.5	-66.4		101.9	560.2	302.1	17.2	1.000023
65000.0	59.0	-65.8		99.2	561.0	312.6	15.8	1.000022
65500.0	57.6	-65.2		96.5	561.8	324.7	14.9	1.000021
66000.0	56.2	-64.6		93.8	562.6	338.9	11.0	1.000021
66500.0	54.8	-64.0		91.3	563.4	4.8	8.4	1.000020
67000.0	53.5	-63.4		88.8	564.2	33.3	7.9	1.000020
67500.0	52.1	-62.8		86.4	565.0	49.3	7.9	1.000019
68000.0	50.9	-62.2		84.0	565.8	64.1	8.5	1.000019
68500.0	49.6	-61.7		81.6	566.5	69.2	8.6	1.000018
69000.0	48.4	-61.4		79.7	566.9	68.6	8.2	1.000018
69500.0	47.3	-61.2		77.7	567.2	67.9	7.8	1.000017
70000.0	46.2	-60.9		75.7	567.6	65.7	7.3	1.000017
70500.0	45.0	-60.6		73.8	568.0	62.5	6.7	1.000016
71000.0	44.0	-60.3		72.0	568.3	58.8	6.1	1.000016
71500.0	42.9	-60.0		70.2	568.7	58.0	5.6	1.000016
72000.0	41.9	-59.8		68.4	569.1	57.1	5.2	1.000015
72500.0	40.9	-59.5		66.7	569.5	54.8	4.7	1.000015
73000.0	39.9	-59.2		65.0	569.8	43.2	4.3	1.000014
73500.0	38.9	-58.9		63.3	570.2	30.0	4.1	1.000014
74000.0	38.0	-58.6		61.7	570.6	18.0	4.5	1.000014
74500.0	37.1	-58.3		60.2	571.0	11.4	5.6	1.000013
75000.0	36.2	-57.5		58.5	572.1	8.0	6.8	1.000013
75500.0	35.4	-56.6		56.9	573.3	8.9	7.5	1.000013
76000.0	34.6	-55.8		55.4	574.4	16.1	7.5	1.000012
76500.0	33.8	-54.9		53.9	575.5	23.3	7.7	1.000012
77000.0	33.0	-54.1		52.4	576.6	29.3	7.7	1.000012
77500.0	32.2	-53.2		51.0	577.7	34.4	7.5	1.000011
78000.0	31.5	-52.4		49.6	578.8	39.7	7.3	1.000011
78500.0	30.7	-51.5		48.3	579.9	44.5	7.4	1.000011
79000.0	30.0	-50.7		47.0	581.0	48.5	7.7	1.000010
79500.0	29.3	-50.4		45.9	581.5	52.2	8.0	1.000010
80000.0	28.7	-50.0		44.7	581.9	55.9	8.5	1.000010
80500.0	28.0	-49.7		43.7	582.4	59.4	9.2	1.000010
81000.0	27.4	-49.3		42.6	582.8	62.3	10.0	1.000009
81500.0	26.8	-49.0		41.6	583.3	69.7	11.0	1.000009
82000.0	26.2	-48.7		40.6	583.7	80.5	12.6	1.000009
82500.0	25.6	-48.3		39.6	584.1	88.6	14.6	1.000009
83000.0	25.0	-48.0		38.7	584.6	91.0	16.1	1.000009
83500.0	24.4	-47.7		37.7	585.0	10.7	17.7	1.000008

STATION ALTITUDE 4051.00 FEET MSL  
1 MAY 81 0925 HRS VDT  
ASCENSION NO. 29

UPPER AIR DATA  
1210030029  
JALLEN

TABLE 24 CUN'T

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

GEOMETRIC PRESSURE ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPONT DEGREES	REL. HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DIA- RECTION DEGREES (TN)	INDEX OF REFRACTION
84000.0	23.9	-47.3		36.6	585.5	114.4	17.8
84500.0	23.3	-47.0		35.9	585.9	121.8	19.3
85000.0	22.8	-46.6		35.1	586.3	122.8	17.2
85500.0	22.3	-46.3		34.2	586.8	123.1	14.6
86000.0	21.8	-46.0		33.4	587.2	123.4	11.9
86500.0	21.3	-45.6		32.6	587.6	122.5	9.5
87000.0	20.8	-45.3		31.8	588.1	118.1	7.6
87500.0	20.3	-44.9		31.0	588.5	110.6	5.7
88000.0	19.9	-44.5		30.3	589.1	90.2	3.9
88500.0	19.4	-43.8		29.5	590.0	92.9	3.3
89000.0	19.0	-43.1		28.8	590.8	93.0	2.8
89500.0	18.6	-42.5		28.1	591.7	93.1	2.2
90000.0	18.2	-41.8		27.4	592.6	84.7	2.1
90500.0	17.8	-41.1		26.7	593.5	66.7	3.6
91000.0	17.4	-40.4		26.0	594.3	59.3	5.1
91500.0	17.0	-39.7		25.4	595.2	55.4	6.7
92000.0	16.6	-39.0		24.7	596.1	69.3	8.8
92500.0	16.3	-38.5		24.2	596.7	83.3	11.9
93000.0	15.9	-38.4		23.6	596.9	91.2	15.4
93500.0	15.6	-38.2		23.1	597.1		1.000005
94000.0	15.2	-38.1		22.6	597.3		1.000005
94500.0	14.9	-37.9		22.1	597.5		1.000005
95000.0	14.6	-37.7		21.6	597.7		1.000005
95500.0	14.3	-37.6		21.1	597.9		1.000005
96000.0	14.0	-37.4		20.6	598.1		1.000005

STATION ALTITUDE 4051.00 FEET MSL  
 1 MAY 81 095 HRS MDT  
 ASCENSION NO. 29

MANDATORY LEVELS  
 1210030029  
 JALLEN  
 TABLE 25

GEODETIC COORDINATES  
 33.16712 LAT DEG  
 106.49511 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR DEGREES	TEMPERATURE CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
					DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4920.	21.0	9.6	48*	35.5	6.4
800.0	6628.	16.0	8.0	59*	60.4	9.4
750.0	8416.	12.2	5.1	62*	91.7	14.5
700.0	10302.	7.6	1.9	67*	99.6	8.8
650.0	12295.	3.5	1.8	86*	129.7	6.8
600.0	14410.	-2.1	-4.0	87*	145.1	13.8
550.0	16668.	-5.4	-9.0	76*	170.1	22.4
500.0	19103.	-10.1	-26.3	25*	130.9	24.5
450.0	21742.	-15.1	-32.0	22*	175.4	24.6
400.0	24629.	-22.0	-35.5	26*	186.2	20.6
350.0	27811.	-28.5	-41.7	27*	196.1	41.0
300.0	31369.	-37.6	-50.6	24*	203.5	30.6
250.0	35417.	-46.6			201.6	46.9
200.0	40178.	-54.9			211.8	60.8
175.0	42957.	-57.8			215.5	41.1
150.0	46122.	-61.5			217.4	40.8
125.0	49797.	-66.3			217.0	15.2
100.0	54273.	-65.2			194.7	6.0
80.0	58720.	-66.2			281.4	15.8
70.0	61374.	-66.5			28b.2	18.3
60.0	64432.	-66.2			304.7	16.8
50.0	68096.	-61.8			69.4	6.8
40.0	72656.	-59.2			45.4	4.4
30.0	78670.	-50.7			48.3	7.6
25.0	82591.	-48.0			94.7	16.0
20.0	87454.	-44.7			102.6	4.5
15.0	93883.	-38.0				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

